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			ART UNIT	PAPER NUMBER
			2621	

DATE MAILED: 12/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/697,325

Applicant(s)

FUKUHARA ET AL.

Examiner

Bernard Krasnic

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

Page 1, line 10, page 4, line 15: "or to an codestream" should be -- or to a codestream --.

Page 17, line 1: "D1, as necessary" should be -- D10, as necessary --.

Page 19, line 4: "most significant but" should be -- most significant bit --.

Page 32, line 1: "uppermost layer and to data D73" should be -- lowermost layer and to data D73 --.

Page 35, line 16: "not being error corrected decoded" should be -- not being error corrected and decoded --.

Appropriate correction is required.

Claim Objections

2. Claims 2, 4, 7, 9, 12, 13, 17, 20-22, 24, 27, 29, 32, 35-37, and 40 are objected to because of the following informalities:

Re Claim 2, line 2: "the uppermost layer" should be -- an uppermost layer --.

Re Claim 4, lines 1-2: "if the data" and "than the data volume" should be -- if a data -- and -- a data volume --.

Re Claim 7, line 3: "the error rate" should be -- an error rate --.

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Re Claims 9, 12, 17, 20, 29, 32, 37, and 40, lines 6-7 respectively: "from the most significant bit to the least" should be -- from a most significant bit to a least --.

Re Claim 13, line 14: "the header and" should be -- a header and --.

Re Claims 20 and 40 respectively, lines 1-2: "an encoded codestream is supplied and the input" should be -- an input encoded codestream is supplied and the supplied input --.

Re Claims 20 and 40 respectively, line 3: "filtering an input" should be -- filtering the input --.

Re Claims 20 and 40 respectively, line 13: "portion of the preset" should be -- portion of a preset --.

Re Claim 21, line 10: "packet of a predetermined" should be -- packet or packets of the predetermined --.

Re Claim 22, line 2: "at least the uppermost" should be -- at least an uppermost layer --.

Re Claim 24, line 2: "the data volume of said inspection symbol is larger than the data volume" should be -- a data volume of said inspection symbol is larger than a data volume --.

Re Claim 27, line 3: "the error rate" should be -- an error rate --.

Re Claim 35, line 6: "data of the packets" should be -- data of the packet or packets --.

Re Claim 36, line 11: "from the packet of said COM marker" should be -- from said COM marker --.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 39 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re Claim 39: The limitation "from the packet of said lower layer" in lines 11-12 is insufficient antecedent basis. It is suggested to be -- from said COM marker of a main header or a tile part header --.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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6. Claims 1-6, 8-26, and 28-40 are rejected under 35 U.S.C. 102(b) as being anticipated by Information Technology – JPEG 2000 Image Coding System (ISO/IEC JTC 1/SC 29/WG 1 N1646R, from this point forward shall be referred to as ISO/IEC). Re Claims 1, 8, 10, 11, 21, 28, 30, and 31: ISO/IEC discloses, as recited in claim 1, a picture encoding apparatus (see page 8, section 6.1, JPEG 2000 system for encoding) comprising arithmetic encoding means (see Annex C, arithmetic entropy coding) for applying arithmetic encoding to an input picture (page 8, section 6.1) to generate an encoded codestream; splitting means (see section F.1.2.1 high and low pass filters, sections B.4 - B.5, tiles, levels or layers are associated with sub-bands) for splitting said encoded codestream into a plurality of layers / tiles, layers or sub-bands; packet generating means (see sections B.8) for generating a plurality of packets from one layer / tile, level or sub-band to another; error correction encoding means (see page 13, section A.1.2, error resilience, section A.9, informational markers) for applying error correction encoding (section A.9, informational markers) to data of a header and/or a packet or packets of a predetermined one or more layers / tiles, levels, or sub-bands (see page 18, Fig. A-2, "required at each tile-part header"); and embedding means (see page 13, section A.1.2, types of markers and marker segments) for embedding an inspection symbol / marker generated by said error correction encoding means (see page 13, section A.1.2, error resilience, section A.9, informational markers) in a packet or packets of a predetermined lower layer / tile, level, or sub-band (see page 18, Fig. A-2, "required at each tile-part header" shows that a lower layer is an inherent layer for which a symbol or marker will be embedded).

As to claim 8, it differs from claim 1 only in that the limitation embedding means (see page 13, section A.1.2, types of markers and marker segments) for embedding an inspection symbol / marker is generated by said error correction encoding means (see page 13, section A.1.2, error resilience, section A.9, informational markers) in a main header or in a COM marker of a tile part header (see page 18, Fig. A-2, "required at each tile-part header"). Other than this, claim 8 is analyzed in the same manner as claim 1.

As to claim 10, it differs from claim 1 in that claim 1 is an apparatus claim whereas claim 10 is a method claim. Therefore claim 10 is analyzed in the same manner as claim 1.

As to claim 11, it differs from claim 8 in that claim 8 is an apparatus claim whereas claim 11 is a method claim. Therefore claim 11 is analyzed in the same manner as claim 8.

As to claim 21, it differs from claim 1 in that it is written in a slightly broader manner. Other than this, claim 21 is analyzed in the same manner as claim 1.

As to claim 28, it differs from claim 8 in that it is written in a slightly broader manner. Other than this, claim 28 is analyzed in the same manner as claim 8.

As to claim 30, it differs from claim 10 in that it is written in a slightly broader manner. Other than this, claim 30 is analyzed in the same manner as claim 10.

As to claim 31, it differs from claim 11 in that it is written in a slightly broader manner. Other than this, claim 31 is analyzed in the same manner as claim 11.

The limitations, as recited in claims 1, 8, 21, and 28 respectively, lines 2, 4, 6, 8, and 10, “arithmetic encoding means”, “splitting means”, “packet generating means”, “error correction encoding means”, and “embedding means”, invoke 35 USC 112, 6th paragraph.

Re Claims 2, 34, and 22: ISO/IEC discloses, as recited in claim 2, predetermined one or more layers / tiles, levels, or sub-bands includes at least the uppermost layer / tile, level, or sub-band (see page 18, Fig. A-2, “required at each tile-part header” shows that an upper layer is an inherent layer for error correction encoding by use of markers).

As to claim 22, it differs from claim 2 in that it is written in a slightly broader manner. Other than this, claim 22 is analyzed in the same manner as claim 2.

As to claim 34, it differs from claim 2 in that claim 2 is for an encoder and claim 34 is for a decoder (see page 8, section 6.1, “by means of procedures generates as output digital reconstructed image data”, the production of a correct reconstructed image data shows that the extracting means is applied to the uppermost layer is an inherent feature with respect to being the opposite of the embedding means limitation which is applied to the uppermost layer). Other than this, claim 34 is analyzed in the same manner as claim 2.

Re Claims 3, 15, 23, and 35: ISO/IEC discloses, as recited in claim 3, wherein said embedding means substitutes (see section B.9.3, zero length packet, zero substitutes for no code-blocks) said inspection symbol / marker for data of said packet or packets of

said predetermined lower layer (see page 18, Fig. A-2, "required at each tile-part header" shows that a lower layer is an inherent layer for which a symbol or marker will be embedded).

As to claim 15, it differs from claim 3 in that claim 3 is for an encoder and claim 15 is for a decoder (see page 8, section 6.1, "by means of procedures generates as output digital reconstructed image data", the production of a correct reconstructed image data shows that the extracting means sets the lower layer all to zero is an inherent feature with respect to being the opposite of the embedding means limitation which sets the predetermined lower layer to zero by substitution). Other than this, claim 15 is analyzed in the same manner as claim 3.

As to claim 23, it differs from claim 3 in that it is written in a slightly broader manner. Other than this, claim 23 is analyzed in the same manner as claim 3.

As to claim 35, it differs from claim 15 in that it is written in a slightly broader manner. Other than this, claim 35 is analyzed in the same manner as claim 15.

The limitation, as recited in claims 3, 15, 23, and 35 respectively, "embedding means", invokes 35 USC 112, 6th paragraph.

Re Claims 4 and 24: ISO/IEC discloses if the data volume of said inspection symbol is larger than the data volume of the packets of said predetermined lower layer, said embedding means embeds said inspection symbol across the packets of a plurality of lower layers including said predetermined lower layer (see sections J.10, J.10.1, J.10.2, Rate control).

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As to claim 24, it differs from claim 4 in that it is written in a slightly broader manner. Other than this, claim 24 is analyzed in the same manner as claim 4.

The limitation, as recited in claim 4 and claim 24 respectively, line 3, "embedding means", invokes 35 USC 112, 6th paragraph.

Re Claims 5, 14, and 25: ISO/IEC discloses, as recited in claim 5, said embedding means appends (see section B.9.1) said inspection symbol / marker to data of a packet or packets of said predetermined lower layer (see page 18, Fig. A-2, "required at each tile-part header" shows that a lower layer is an inherent layer for which a symbol or marker will be embedded).

As to claim 14, it differs from claim 5 in that claim 5 is for an encoder and claim 14 is for a decoder (see page 8, section 6.1, "by means of procedures generates as output digital reconstructed image data", the production of a correct reconstructed image data shows that the extracting means at the lowermost layer is an inherent feature with respect to being the opposite of the embedding means at the predetermined lower layer limitation). Other than this, claim 14 is analyzed in the same manner as claim 5.

As to claim 25, it differs from claim 5 in that it is written in a slightly broader manner. Other than this, claim 25 is analyzed in the same manner as claim 5.

The limitation, as recited in claim 5 and claim 25 respectively, lines 1-2, "embedding means", invoke 35 USC 112, 6th paragraph.

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Re Claims 6 and 26: ISO/IEC discloses, as recited in claim 6, said embedding means changes the data length (see section B.9.1, bit stuffing routine, "thus one zero bit stuffed ...") stated in a packet header of a packet or packets of said predetermined lower layer (see page 18, Fig. A-2, "required at each tile-part header" shows that a lower layer is an inherent layer for which a symbol or marker will be embedded).

As to claim 26, it differs from claim 6 in that it is written in a slightly broader manner. Other than this, claim 26 is analyzed in the same manner as claim 6.

The limitation, as recited in claim 6 and claim 26 respectively, lines 1-2, "embedding means", invoke 35 USC 112, 6th paragraph.

Re Claims 9, 12, 29, and 32: ISO/IEC discloses, as recited in claim 9, a picture encoding apparatus (see page 8, section 6.1, JPEG 2000 system for encoding) comprising filtering means (see section F.1.2.1 high and low pass filters, sections B.4 - B.5, tiles, levels or layers are associated with sub-bands) for filtering an input picture (page 8, section 6.1) to generate a plurality of sub-bands; code block generating means (see section B.6, division of the sub-bands into code-blocks, B.7) for splitting each sub-band to generate a plurality of code blocks each being of a predetermined size (see B.6, code block size is determined by precinct size); bitplane generating means (see Annex D, paragraphs 1-3) for generating a plurality of bitplanes (see Fig. D-1) from the most significant bit to the least significant bit (see Annex D, paragraph 2), from one code block to another; bit modeling means (see section D.3, D.3.1, significant propagation) for executing bit modeling from one bitplane to another; encoding pass generating

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means (see section D.6, selective arithmetic coding bypass) for generating an encoding pass from one bitplane to another; arithmetic encoding means (see Annex C, arithmetic entropy coding) for executing arithmetic coding in the encoding pass generated by said encoding pass generating means to generate an encoded codestream; splitting means (see section F.1.2.1 high and low pass filters, sections B.4 - B.5, tiles, levels or layers are associated with sub-bands) for splitting said encoded codestream into a plurality of layers / tiles, layers or sub-bands; packet generating means (see sections B.8) for generating a plurality of packets from one layer / tile, level or sub-band to another; error correction encoding means (see page 13, section A.1.2, error resilience, section A.9, informational markers) for applying error correction encoding (section A.9, informational markers) to data of a header and/or a packet or packets of predetermined one or more layers / tiles, levels, or sub-bands (see page 18, Fig. A-2, "required at each tile-part header"); and embedding means (see page 13, section A.1.2, types of markers and marker segments) for embedding an inspection symbol /marker generated by said error correction encoding means (see page 13, section A.1.2, error resilience, section A.9, informational markers) in a portion of a predetermined code block (see page 18, Fig. A-2, "required at each tile-part header") or in a newly added encoding pass.

As to claim 29, it differs from claim 9 in that it is written in a slightly broader manner. Other than this, claim 29 is analyzed in the same manner as claim 9.

The limitations, as recited in claims 9 and 29 respectively, lines 2, 4, 6, 8, 9, 11, 14, 16, 18 and 20, "filtering means", "code block generating means", "bitplane generating means", "bit modeling means", "encoding pass generating means",

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"arithmetic encoding means", "splitting means", "packet generating means", "error correction encoding means", and "embedding means", invoke 35 USC 112, 6th paragraph.

As to claim 12, it differs from claim 9 in that claim 9 is an apparatus claim whereas claim 12 is a method claim. Therefore claim 12 is analyzed in the same manner as claim 9.

As to claim 32, it differs from claim 12 in that it is written in a slightly broader manner. Other than this, claim 32 is analyzed in the same manner as claim 12.

Re Claims 13, 16, 18, 19, 33, 36, 38, and 39: ISO/IEC discloses, as recited in claim 13, a picture decoding apparatus (see page 8, section 6.1, JPEG 2000 system for decoding), supplied with claim 1's respective encoded codestream (see above), and decoding the input encoded codestream to restore an input picture (see page 8, section 6.1, JPEG 2000 system for decoding), said apparatus comprising analysis means / means of specified procedures for analyzing said input encoded codestream (see page 8, section 6.1, JPEG 2000 system for decoding); extraction means for extracting said inspection symbol from a packet or packets of said lower layer (see page 8, section 6.1, "by means of procedures generates as output digital reconstructed image data", the production of a correct reconstructed image data shows that the extraction limitation is an inherent feature with respect to being the opposite of the embedding limitation of the encoder); error correcting decoding means for applying error correction and decoding to data of the header and/or a packet or packets of one or more preset layers, using said

inspection symbol (see page 8, section 6.1, "by means of procedures generates as output digital reconstructed image data", the production of a correct reconstructed image data shows that the error correcting decoding means is an inherent feature with respect to being the opposite of the embedding a symbol using error correcting encoding); and decoding means for decoding the encoded codestream following the error correction and decoding (see page 8, section 6.1, "by means of procedures generates as output digital reconstructed image data", the production of a correct reconstructed image data shows that the decoding means is an inherent feature with respect to being the opposite of the encoding before using the error correcting encoding limitation).

As to claim 16, it differs from claim 13 only in that the limitation embedding means (see page 13, section A.1.2, types of markers and marker segments) and extracting means for embedding an inspection symbol / marker is generated by said error correction encoding means in a main header or in a COM marker (see page 13, section A.1.2, error resilience, section A.9, informational markers) of a tile part header (see page 18, Fig. A-2, "required at each tile-part header", see page 8, section 6.1, "by means of procedures generates as output digital reconstructed image data", the production of a correct reconstructed image data shows that the extracting means is an inherent feature with respect to being the opposite of the embedding limitation). Other than this, claim 16 is analyzed in the same manner as claim 13.

As to claim 18, it differs from claim 13 in that claim 13 is an apparatus claim whereas claim 18 is a method claim. Therefore claim 18 is analyzed in the same manner as claim 13.

As to claim 19, it differs from claim 16 in that claim 16 is an apparatus claim whereas claim 19 is a method claim. Therefore claim 19 is analyzed in the same manner as claim 16.

As to claim 33, it differs from claim 13 in that it is written in a slightly broader manner. Other than this, claim 33 is analyzed in the same manner as claim 13.

As to claim 36, it differs from claim 16 in that it is written in a slightly broader manner. Other than this, claim 36 is analyzed in the same manner as claim 16.

As to claim 38, it differs from claim 18 in that it is written in a slightly broader manner. Other than this, claim 38 is analyzed in the same manner as claim 18.

As to claim 39, it differs from claim 19 in that it is written in a slightly broader manner. Other than this, claim 39 is analyzed in the same manner as claim 19.

The limitations, as recited in claims 13, 16, 33, and 36 respectively, “analysis means”, “extraction means”, “error correcting decoding means”, and “decoding means”, invoke 35 USC 112, 6th paragraph.

Re Claims 17, 20, 37, and 40: ISO/IEC discloses, as recited in claim 17, a picture decoding apparatus (see page 8, section 6.1, JPEG 2000 system for decoding), supplied with claim 9’s respective encoded codestream (see above), and decoding the input encoded codestream to restore an input picture (see page 8, section 6.1, JPEG

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2000 system for decoding), said picture decoding apparatus comprising analysis means / means of specified procedures for analyzing said input encoded codestream (see page 8, section 6.1, JPEG 2000 system for decoding); extraction means for extracting said inspection symbol from said portion of the preset code block (see page 8, section 6.1, "by means of procedures generates as output digital reconstructed image data", the production of a correct reconstructed image data shows that the extraction limitation is an inherent feature with respect to being the opposite of the embedding said portion of the preset code block limitation of the encoder) or in said newly added encoding pass; error correcting decoding means for applying error correction and decoding to data of a header, and/or a packet or packets of one or more preset layers, using said inspection symbol (see page 8, section 6.1, "by means of procedures generates as output digital reconstructed image data", the production of a correct reconstructed image data shows that the error correcting decoding means is an inherent feature with respect to being the opposite of the embedding a symbol using error correcting encoding); and decoding means for decoding the encoded codestream following the error correction and decoding (see page 8, section 6.1, "by means of procedures generates as output digital reconstructed image data", the production of a correct reconstructed image data shows that the decoding means is an inherent feature with respect to being the opposite of the encoding before using the error correcting encoding limitation).

As to claim 20, it differs from claim 17 in that claim 17 is an apparatus claim whereas claim 20 is a method claim. Therefore claim 20 is analyzed in the same manner as claim 17.

As to claim 37, it differs from claim 17 in that it is written in a slightly broader manner. Other than this, claim 37 is analyzed in the same manner as claim 17.

As to claim 40, it differs from claim 20 in that it is written in a slightly broader manner. Other than this, claim 40 is analyzed in the same manner as claim 20.

The limitations, as recited in claim 17 and claim 37 respectively, "analysis means", "extraction means", "error correcting decoding means", and "decoding means", invoke 35 USC 112, 6th paragraph.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 7 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over ISO/IEC in view of Christopoulos (IEEE vol. 46, pages 1103-1127, 2000, "The JPEG2000 Still Image Coding System: An Overview"). The teachings of ISO/IEC have been discussed above.

However, ISO/IEC fails to disclose or fairly suggest error correction encoding means sets the subject entity of the error correction encoding depending on the error rate of a communication channel on which said encoded codestream is transmitted.

Christopoulos discloses said error correction encoding means sets the subject entity of the error correction encoding depending on the error rate of a communication

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channel on which said encoded codestream is transmitted (see page 1118, section IV.5, Error Resilience).

Therefore, in view of Christopoulos, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the error rate of a communication channel in the error correction encoding means in order to improve the performance of transmitting compressed images.

The limitation, as recited in claim 7 and claim 27 respectively, lines 1-2, "error correction encoding means", invoke 35 USC 112, 6th paragraph.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Yip et al discloses an encoding method and apparatus for representing a digital image; Chan et al discloses a digital image compression; Abe et al discloses an image processing apparatus, program, and storage medium that can selectively vary embedding specification of digital watermark data; Chai et al discloses an apparatus and method for data partitioning to improving error resilience; Sakaguchi et al discloses a device and method for encoding digital image; Schwartz et al discloses a reversible embedded wavelet system implementation; Fukuhara et al discloses a picture encoding apparatus and method program and recording medium; Fujishiro et al discloses an image coding apparatus and method, and program and recording medium; Chai discloses an apparatus and method for forming a coding unit; Moccagatta et al discloses an error resilient packetization method and packet structure.

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10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bernard Krasnic whose telephone number is (571) 270-1357. The examiner can normally be reached on Mon-Thur 7:30am-5:00pm and every other Friday 7:30am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jong-Suk (James) Lee can be reached on (571) 272-7044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Bernard Krasnic
December 4, 2006


JONG SUK LEE
SUPERVISORY PATENT EXAMINER